

REMARKS

Applicant submits the following remarks. Claims 1, 27, 42, 53, and 54 have been amended. New claims 55-59 have been added. Support for the amendments can be found throughout the specification, including the figures. No new matter has been added. Claims 1, 3-15, 17-30, 32-34, 36-51, and 53-59 are pending.

Rejection under 35 U.S.C. § 103

Claims 1, 3-15, 17-30, 32-34, 36-51, 53 and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,605,024 to Sucato et al. ("Sucato") in view of U.S. Patent No. 5,913,788 to Herren ("Herren") and U.S. Patent No. 5,527,625 to Bodnar ("Bodnar"). Applicant respectfully requests withdrawal of this rejection. Claims 1, 17, 27, 42, 53 and 54 are independent.

I. Sucato, Herren and Bodnar, alone and in combination, fail to teach or suggest a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids, and each expanded web slot has a length to width ratio of about 2:1 or greater.

Applicant has discovered a metal framing member including a formed metal sheet including a plurality of expanded web slots including voids and metal web elements in a region of the formed metal sheet, wherein the region includes a plurality of reinforcements proximate to the web and confined to the web elements and exclusive to the web voids, and each expanded web slot has a length to width ratio of about 2:1 or greater. See claims 1, 27, and 42. The Examiner states that "from the secondary references of Bodnar and Herren, it is clear that both, dimples and reinforcements, may be included with the slots." See page 4 of the Office Action. However, the combined references fail to teach all elements of claims 1, 27, and 42.

Sucato fails to teach or suggest a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids, and each expanded web slot has a length to width ratio of about 2:1 or greater. As described in Sucato, "FIG. 22 is a cross sectional view of FIG. 21 with a crease line or indentation 66 added to neck 65 to strengthen the mesh when the stud is in its expanded position." See column 4, lines 31-33 of Sucato (emphasis added). The crease line or indentation described in Sucato is not a reinforcement proximate to an

expanded web slot. Example of a reinforcement proximate to an expanded web slot, which are next to the expanded web slots, are shown in FIGS. 3 of Applicant's specification. As shown below in the reproduction of FIG. 22 of Sucato, crease line or indentation **66** extends across and through the expandable mesh **65**, including the voids. See column 4, lines 22-25 and lines 31-33. Thus, the crease line or indentation is not proximate to an expanded web slot and confined to the web elements and exclusive to the web voids. There is no teaching or suggestion in Sucato of any structural feature proximate to an expanded web slot.

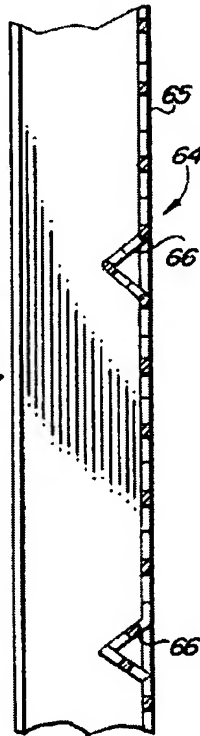


FIG. 22

Sucato FIG. 22

Moreover, the crease line or indentation is not a reinforcement. Indeed, there is no teaching or suggestion in Sucato of any structure other than a crease or indentation across the width of an expandable web. In addition, the web in Sucato has voids that have a length to width ratio of approximately 1:1. Sucato does not describe or suggest each expanded web slot has a length to width ratio of about 2:1 or greater. The expanded web slot has a length to width ratio of about 2:1 or greater is necessary to achieve the structure on the web that is not available when the ratio is approximately 1:1. See Declaration of Anderson attached as Appendix A.

Bodnar does not cure these deficiencies. Bodnar describes structures that are pierced. See column 1, line 64 of Bodnar. There is no description or suggestion in Bodnar of a plurality of expanded web slots. Bodnar also describes a metal member having corner flanges 100, 104 in the corners of generally triangular openings 92. See column 6, line 55 - column 7, line 2; FIG. 5 of Bodnar. Bodnar also describes generally three-sided depressions such as depressions 42, 44 formed in a strut portion 28 of the disclosed member. See column 6, lines 10-13; FIG. 1 of Bodnar. Bodnar does not describe or suggest a plurality of reinforcements proximate to the web slots. The depressions and flanges of Bodnar are not proximate to expanded web slots and confined to the web elements and exclusive to the web voids, and each expanded web slot has a length to width ratio of about 2:1 or greater.

Herren also does not cure the deficiencies of Sucato. The Examiner has not identified any reinforcement disclosed in Herren, which relates to a fire- and seismic-resistant wall structure. Indeed, stud 22 in Herren does not include any structural strengthening features. See FIG. 1 of Herren. Herren appears not to teach or suggest a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids, and each expanded web slot has a length to width ratio of about 2:1 or greater.

Applicant noted that the Examiner had not indicated where reinforcements were suggested by Herren. Again, the Examiner does not indicate where Herren teaches or suggests "dimples and reinforcements" that "may be included with the slots." Page 4 of the Office Action. Without these indications, the finality of this Office Action is not proper; the Examiner has not provided Applicants with the information need to rebut the erroneous contentions in this Office Action and the previous office action.

Moreover, the Examiner has not established that one of ordinary skill in the art would modify an invention related to a stud assembly having an expandable mesh connector (Sucato) based on the teachings of references that do not include any expandable mesh or slots (Bodnar and Herren).

Furthermore, the processes taught in each of Bodnar, Sucato, and Herren are significantly distinct: Bodnar teaches a stamping process; Sucato teaches a roll forming process; and Herren fails to teach any process that involves introducing any structural strengthening feature

whatsoever. Thus, there is no motivation to combine these references to arrive at the device and methods of claims 1, 27, and 42.

For at least these reasons, claims 1, 27, and 42, and claims that depend therefrom, are patentable over Sucato in view of Bodnar and Herren. Applicant requests that this rejection be reconsidered and withdrawn.

II. Sucato, Herren and Bodnar, alone or in combination, fail to teach or suggest a formed metal sheet having a length and including a web region and two flanges, each flange extending from the web region, and from two to five columns of web slots extending along a portion of the length in the web region or at least one of the flanges.

As noted in Applicant's amendment filed December 8, 2004, Applicant has discovered a preexpanded metal framing member including from two to five columns of web slots extending along a portion of the length of the member. See claim 17; FIG. 7-9. Sucato, in contrast, discloses "a pair of U-shaped members 62 and 63 which may be formed of a metallic material that are interconnected by bight 64 comprising an expandable mesh 65." See col. 4, lines 22-25. While claim 17 recites two to five columns of slots, the mesh disclosed in Sucato requires forming at least eight separate and distinct columns of slots. See FIG. 20-21. Sucato fails to disclose a metal framing member including from two to five columns of web slots.

This missing element cannot be properly drawn from Bodnar or Herren. First, neither reference teaches including from two to five columns of web slots extending along a portion of the length of a framing member. Second, as described above, the teachings of Bodnar and Herren are not properly combinable with the teachings of Sucato, as there is no motivation or suggestion provided by the Examiner or contained within the references to combine Sucato with Bodnar or Herren. Indeed, neither Bodnar nor Herren describe or suggest two to five columns of web slots.

In the Office Action, the Examiner does not address this argument, which was previously set forth by Applicant in at least the previous response. See pages 4-5 of the Office Action. Indeed, a *prima facie* case of obviousness has not been articulated by the Examiner for rejecting claim 17, and claims that depend therefrom. Thus, as before, the final nature of the October 29, 2006 action is improper. Moreover, claim 17 and claims that depend therefrom are patentable over Sucato combined with Bodnar and Herren.

For at least these reasons, claim 17 and claims that depend therefrom are patentable over Sucato combined with Bodnar and Herren. Applicant respectfully requests that this rejection be reconsidered and withdrawn.

III. Sucato, Herren and Bodnar, alone or in combination, fail to teach or suggest expanding the slots of the web region to form expanded slots having a web element and a web void, each expanded web slot having a length to width ratio of about 2:1 or greater, and heat treating the member after expanding the slots.

The Examiner previously indicated that the subject matter of heat treating the claimed metal framing matter is patentable (see September 8, 2004 Office Action, page 3), yet continues not to reject claim 53, which recites heat treating a frame member after expanding the slots, as obvious over Sucato in view of Bodnar and Herren. Expanding the slots of the web region to form expanded slots having a web element and a web void, each expanded web slot having a length to width ratio of about 2:1 or greater, and heat treating the member after expanding the slots is not taught by Sucato, Bodnar or Herren, nor their combination.

The Examiner does not suggest--and Applicant agrees--that neither Sucato nor Herren teaches heat treating expanded web slots in a formed metal sheet. The Examiner incorrectly asserts that Bodnar teaches this element, referring to column 7, line 50 - column 8, line 65. This portion of Bodnar actually discloses that the described member **can be formed from cold rolled or hot rolled steel**. See column 2, lines 41-42 of Bodnar. As mentioned above, Bodnar describes structures that are pierced. See column 1, line 64 of Bodnar. Bodnar does not teach or suggest expanding the slots of the web region to form expanded slots having a web element and a web void, and heat treating the member after expanding the slots. Bodnar merely describes piercing cold rolled or hot rolled steel. There is no expanding taught or suggested in Bodnar. Similarly, there is no heat treating after expanding taught or suggested by Bodnar. Additionally, as described above, there is no motivation or suggestion to combine the teachings of Sucato with the teachings of Bodnar and Herren.

Again, the Examiner does not address this argument, which was previously set forth by Applicant in at least the previous response. See pages 4-5 of the Office Action. Indeed, a *prima facie* case of obviousness has not been articulated by the Examiner for rejecting claim 53. Thus,

as before, the final nature of the October 20, 2005 action is improper. Moreover, claim 53 is patentable over Sucato combined with Bodnar and Herren.

Moreover, the expanded web slot has a length to width ratio of about 2:1 or greater is necessary to achieve the structure on the web that is not available when the ratio is approximately 1:1. See Declaration of Anderson attached as Appendix A.

For at least these reasons, claim 53 should be allowed. Applicant respectfully requests that this rejection be reconsidered and withdrawn.

IV. Sucato, Herren and Bodnar, alone or in combination, fail to teach or suggest a formed metal sheet including a plurality of expanded web slots in a region of the formed metal sheet, wherein the expanded web slots are heat treated and each expanded web slot having a length to width ratio of about 2:1 or greater.

Claim 54, which recites a metal framing member having expanded web slots that are heat treated, also stands rejected as obvious over Sucato in view of Bodnar and Herren. As discussed above with reference to claim 53, none of these references discloses expanded web slots that have been heat treated. Moreover, none of Sucato, Bodnar or Herren teach or suggest a formed metal sheet including a plurality of expanded web slots in a region of the formed metal sheet, wherein the expanded web slots are heat treated. As noted above, the Examiner contends that "Bodnar discloses the heat treating process to form the beam and openings." See page 3 of the Office Action. Indeed, Bodnar does not recognize or suggest that expanded web slots can be heat treated.

Furthermore, as before, the Examiner does not address this argument in the "final" Office Action. See pages 4-5 of the Office Action. Indeed, a *prima facie* case of obviousness has not been articulated by the Examiner for rejecting claim 54. Thus, as before, the final nature of this action is improper. Moreover, claim 54 is patentable over Sucato combined with Bodnar and Herren.

Moreover, the expanded web slot has a length to width ratio of about 2:1 or greater is necessary to achieve the structure on the web that is not available when the ratio is approximately 1:1. See Declaration of Anderson attached as Appendix A.

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Furthermore, as noted, the combination of these references is improper. For at least these reasons, claim 54 should be allowed. Applicant respectfully requests that this rejection be reconsidered and withdrawn.

CONCLUSION

In light of the foregoing amendments and remarks, Applicant respectfully requests that the pending claims be allowed and the application pass to issuance. A petition for a one month extension of time and the required fee are enclosed. The Commissioner is authorized to apply any charges or credits to deposit account 19-4293.

Respectfully submitted,

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